
Leaving Earth
TOGETHER
NASA Authorization for Fiscal Years 2011-2013
Public Law 111-267
Presentation to JUSTSAP
Gary Martin
Director, New Ventures and Communications Directorate
NASA Ames Research Center

Benefit Humanity

"**It is essential to tie space activity to human challenges**

ranging from enhancing the influence, relationships, security, economic development, and commerce of the United States

to **improving the overall human condition**."

(Excerpts from PL 111-267 Sec. 2(5))

Human Space Flight and Exploration

"The long term goal of the human space flight and exploration efforts of NASA shall be to

expand permanent human presence beyond low-Earth orbit

and to do so, where practical, in a manner

involving international partners."

(Excerpts from PL 111-267 Sec. 202(a))

Commercial and International

"It is critical to identify an appropriate combination of NASA and related United States Government programs, while providing a framework that allows partnering, leveraging and stimulation of the existing and emerging **commercial and international efforts in both Earth space and the regions beyond**."

(Excerpts from PL 111-267 Sec. 2(11))

Launch Vehicles to LEO and Beyond

"The United States must

develop, as rapidly as possible, replacement vehicles capable of providing both

human and cargo launch capability to low-Earth orbit and to destinations beyond low-Earth orbit."

(Excerpts from PL 111-267 Sec. 2(14))

Human Space Flight and Exploration

"To determine if humans can live in an extended manner in space with decreasing reliance on Earth, starting with utilization of low-Earth orbit infrastructure, to identify potential roles that space resources such as energy and materials may play, to **meet national and global needs and challenges**, such as potential cataclysmic threats, and to explore the viability of and lay the foundation for sustainable economic activities in space;"

(Excerpts from PL 111-267 Sec. 202(b))

Human Space Flight and Exploration

(1) The ISS, technology developments … and follow-on transportation systems … **form the foundation of initial capabilities for missions beyond low-Earth orbit to a variety of lunar and Lagrangian orbital locations...**

(2) These initial missions and related capabilities should be utilized to provide operational experience, technology development, and the placement and assured use of in-space infrastructure and in-space servicing of existing and future assets

(Excerpts from PL 111-267 Sec. 203(a))

Expansion of Human Space Flight Beyond the International Space Station and Low-Earth Orbit

"The ability to **support human missions** in regions **beyond low-Earth orbit and on the surface of the Moon** can also **drive developments** in emerging areas of **space infrastructure and technology**."

(Excerpts from PL 111-267 Sec. 301(a))

Expansion of Human Space Flight Beyond the International Space Station and Low-Earth Orbit

"Developments in space infrastructure and technology can

stimulate and enable increased space applications, such as in-space servicing, propellant resupply and transfer, and in situ resource utilization, and

open opportunities for additional users of space, whether

national, commercial or **international**."

(Excerpts from PL 111-267 Sec. 301(a))

Expansion of Human Space Flight Beyond the International Space Station and Low-Earth Orbit

"Future international **missions beyond low-Earth orbit should be designed to incorporate** capability development and availability, affordability, and **international contributions**."

(Excerpts from PL 111-267 Sec. 301(a))

Expansion of Human Space Flight Beyond the International Space Station and Low-Earth Orbit

"It is the Policy of the United States that NASA develop a Space Launch System as a follow-on to the Space Shuttle that can

access cis-lunar space and the regions of space beyond low-Earth orbit in order to enable the United States to

participate in global efforts to access and develop this increasingly strategic region."

(Excerpts from PL 111-267 Sec. 302(a))

Technology Development Authorized

"**DEVELOPMENT AUTHORIZED**.—The Administrator may initiate activities to develop the following:

(1) **Technologies identified as necessary elements of missions beyond low-Earth orbit.**

(2) In-space capabilities such as refueling and storage technology, orbital transfer stages, innovative in-space propulsion technology, communications, and data management that facilitate a broad range of users (including military and commercial) and applications defining the architecture and design of such missions.

(3) Spacesuit development and associated life support technology.

(4) Flagship missions."

(Excerpts from PL 111-267 Sec. 308

Maximum Use of ISS

"…INTERNATIONAL COOPERATION.—**The ISS shall continue to be utilized as a key component of international efforts to build missions and capabilities that further the development of a human presence beyond near-Earth space** and advance United States security and economic goals.

The Administrator shall actively seek ways to encourage and enable the use of ISS capabilities to support these efforts."

(Excerpts from PL 111-267 Sec. 502)

Expansion of Human Space Flight Beyond the International Space Station and Low-Earth Orbit

"The extension of the human presence from low-Earth orbit to other regions of space beyond low-Earth orbit will **enable missions to the surface of the Moon and missions to deep space destinations such as near-Earth asteroids and Mars.**

(Excerpts from PL 111-267 Sec. 203(a))